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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/620,726

07/15/2003

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310121.404

9061

34212 7590 05/07/2007
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EXAMINER

AVERY, BRIDGET D

ART UNIT

PAPER NUMBER

3618

MAIL DATE

DELIVERY MODE

05/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/620,726	Applicant(s) GRAY, CHARLES L.	
	Examiner Bridget Avery	Art Unit 3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 19-27 and 41-43 is/are pending in the application.
 4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 19, 20, 23-27 and 41-43 is/are rejected.
- 7) ☒ Claim(s) 16, 21 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments filed May 31, 2006, with respect to the rejection(s) of claim(s) 1-13 and 19-27 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-15, 25-27 and 41- 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Forster (US Patent 4,252,508).

Forster teaches an assembly similar to applicant's including:

- A first and second pump/motor (30, 31)
- A first and second drive plate assembly (9, 10)
- A common shaft (8)
- The plate assemblies (9, 10) are in hard contact with a first and second end of the shaft (8), respectively, in a plane perpendicular to the longitudinal axis of the shaft (8)

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- The plate assemblies (9, 10) and shaft (8) acting as a solid element when under compression to cancel axial loads generated by the pump/motors (30, 31) through the shaft (8)
- A first and second tapered annular roller bearing (32, 33)
- A spacer/gear (6, 7) provided in the gap between annular bearing (32, 33) and plate (9, 10), as shown in Figure 1
- A torque transferring assembly/unit (5, 20, 24)
- Re claim 7, see column 2, lines 55-63. Re claims 6 and 10, the bearings are positioned in the housing (1). Re claims 25 and 27, the method of operating a plurality of pump motors and the method of improving the efficiency of two or more opposing pump/motors is inherently disclosed. The rationale for this inherency is that the prior art device, in its normal and usual operation, would necessarily perform the claimed method. See MPEP 211.02. Re claims 8, 42 and 43, the pistons (11, 13) are actuators that control displacement changes of each of the first and second pump/motors (30, 31) to balance pressure.

3. Claims 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Forster ('508).

Forster teaches an assembly similar to applicant's including:

- First and second pump/motors (30, 31)
- A torque transferring device (5)
- A first and second bearing (32, 33) coupled to a common shaft (8)

- A housing (1)
- First and second seals (35, 36)
- The seals (35, 36) divide the housing into a first, second and third region, as shown in Figures 1 and 2.

4. Claims 23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Forster ('508).

Forster teaches an assembly similar to applicant's including:

- First and second pump/motors (30, 31)
- A torque transferring device (5, 20, 24)
- A shaft defined by the pistons (11, 13) coupled by integrally formed forks (34)
- The torque transferring device including gears (20, 24) that transmit torque from one shaft (5) to a common shaft (8)

5. Claims 1-15, 19, 20, 23-27 and 41- 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Thoma (CH 325587).

Thoma teaches an assembly similar to applicant's including:

- A first and second pump/motor
- A first and second drive plate assembly (TF)
- A common shaft (AW)
- The plate assemblies are in hard contact with a first and second end of the shaft, respectively, in a plane perpendicular to the longitudinal axis of the shaft

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- The plate assemblies (TF) and shaft (AW) acting as a solid element when under compression to cancel axial loads generated by the pump/motors through the shaft (AW)
- A first and second tapered annular roller bearing (RL)
- A spacer provided in the gap between annular bearing (RL) and plate (TF), as shown in Figure 1
- A torque transferring assembly/unit (HK)
- Re claims 19 and 20, see seals (LA, LR). Re claims 25 and 27, the method of operating a plurality of pump motors and the method of improving the efficiency of two or more opposing pump/motors is inherently disclosed. The rationale for this inherency is that the prior art device, in its normal and usual operation, would necessarily perform the claimed method. See MPEP 211.02. Re claims 8, 42 and 43, the pistons (K) are actuators that control displacement changes of each of the first and second pump/motors to balance pressure.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Forster ('508).

Forster teaches the features described above.

Forster lacks the teaching of the spacer/key having a thickness sufficient to just bridge the distance between respective drive plates and bearings.

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to increase the thickness of the spacer/key, since such a modification would have involved a mere change in size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thoma ('587).

Thoma teaches the features described above.

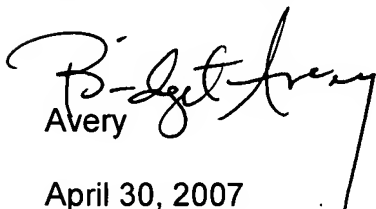
Thoma lacks the teaching of the spacer/key having a thickness sufficient to just bridge the distance between respective drive plates and bearings.

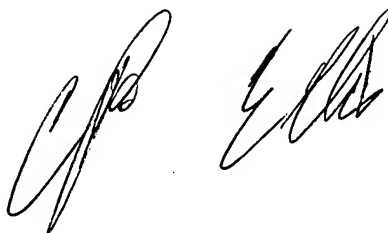
It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to increase the thickness of the spacer/key, since such a modification would have involved a mere change in size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

Allowable Subject Matter

8. Claims 16, 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Any inquiry concerning this communication should be directed to Bridget Avery at telephone number 571-272-6691.


Avery
April 30, 2007



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